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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/712,449 | 11/12/2003 | Ivan Melnyk | CDM/8488.9999 | 8694 |

7590 10/04/2004
Chernoff, Vilhauer, McClung & Stenzel, L.L.P.
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EXAMINER

NGUYEN, TU T

ART UNIT PAPER NUMBER

2877

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,449

Applicant(s)

MELNYK ET AL.

Examiner

Tu T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Canada (Application Num. 2,411,638) on November 12, 2002. It is noted, however, that applicant has not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b).

For this application, only the first page of the priority document was received. Applicant needs to send in a whole application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (EP 0 640 819) in view of Sun et al (4,883,354) and Fein et al (6,064,899).

With respect to claim 1, Hsu discloses an optical sensor module. The sensor comprises: an optical module comprising a light source 50 (fig 5) and a photodetector 52 (fig 5); a probe 122 (fig 16) comprising an optical fiber core 40,42,44 (fig 16), the probe configured to be coupled to a transducer 22 (fig 4) (the diaphragm (46) performs the same function as the claimed transducer); an extension comprising optical fiber cores 128, 130, 142 (fig 16); first connector 124,126 (fig 16) configured to optically

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couple the extension to the probe 122 (fig 16); a signal processor 56 (fig 5) configured to process signals from the photodetector 52 (fig 5).

Hsu does not explicitly disclose a second connector and the material (glass or plastic) of the probe and the extension fibers. Sun discloses a sensor comprising: a second connector 29 (fig 1) for connecting an extension cable 31 (fig 1) to an optical module 41 (fig 1). Fein discloses a sensor comprising: a probe 150 (fig 1) and an extension 140 (fig 1) fiber. Fein also teaches that the fibers can be made of glass or plastic depending on the needs (column 2, lines 25-33). It would have been obvious to modify Hsu with a second connector as taught by Sun to facilitate the testing and also it would have been obvious a design choice to modify Hsu's fibers with the claimed material for different needs as taught by Fein in column 2, lines 25-33.

With respect to claims 2,4, using the claimed incoherent light source and polymethyl methacrylate fiber for a sensor would have been known. It would have been obvious to modify Hsu with the known claimed limitations to make the system more accurate.

With respect to claims 3,5, Sun discloses using typical fibers with a diameter 0.5 millimeter (column 7, line 66).

With respect to claims 6-7, Hsu does not explicitly disclose the claimed blue or broadband light source as claimed. However, it would have been obvious to modify Hsu

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with the claimed light sources to sense different type of substances. Further, Hsu discloses a membrane 46 (fig 5) being sensitive to a pressure as claimed (column 17, lines 13-21).

With respect to claim 8, the claimed transducer for reacting to specific chemical substance would have been known. It would have been obvious to modify Hsu with different types of known transducer to sense different characteristics of the substance.

With respect to claim 9, Hsu discloses a first light fiber 40 (fig 5) connected to a light source 50 (fig 5) and the second fiber 42 or 44 (fig 5) connected to a detector 52 or 54 (fig 5).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley Jr. can be reached on (571) 272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu T. Nguyen
Primary Examiner
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09/27/2004